Internet Addiction Prevalence of Students from Selected Technological and Computer Universities

Khaing Nyein Thant[#1], Nu Nu Khaing[#2]

[#1] *Department of Educational Psychology, Sagaing University of Education, Sagaing*

[#2] *Department of Educational Psychology, Yangon University of Education, Yangon*

Myanmar

[1]nyeint88@gmail.com

[2]nn.nunu@gmail.com

Abstract **– Internet addiction is one of the problems emerged with the development of technology and is common among university students. It can ruin users' lives by causing various physiological, behavioral, social, educational and mental problems. Therefore, it is needed for every university learning environment to recognize and respond to its threats. In Myanmar, however, there is little empirical research on internet addiction. To fill this need, the present study aims to investigate internet addiction prevalence of students from selected technological and computer universities. In this study, quantitative approach and descriptive survey design was used. A total of 405 students from Sagaing Technological University, West Yangon Technological University and University of Computer Studies (Yangon) were chosen by random sampling technique. To collect the data, demographic questions and Young's Internet Addiction Test were used. As the results, it was found that average online-time of the participants was 3.92 hours per day. Their predominant time for surfing internet was night and major purpose for using internet was social networking, especially Facebook. What a terrifying result of this study was high percentage of internet addicts (30.4%) among the participants. Moreover, it was found that internet addiction of students was different by gender, specifically; male students were more addicted to internet than females. Furthermore, this study also found significantly positive correlations among number of SNS, online-time and internet addiction. Therefore, it can be concluded that the more SNS and online time students surfed, the higher probability of internet addiction they occupied.**

Keywords **- Internet, Internet Addiction, Internet Addiction Prevalence, SNS, Time-spent Online**

I. INTRODUCTION

Through internet technology, people get many opportunities now than a few decades ago. For example, internet helps people to find knowledge easily, to widen their social network, to download many media clips, to do all shopping with a few clicks, and to map almost every place in the world.

However, like a double-edged sword, many negative impacts of internet were also discovered. Among them, the risk of internet over-using was a growing concern worldwide. As the connected devices for internet were abundant, high-speed internet access is delivered and plenty of social platforms were driven, people spent most of their time online; consequently, excessive internet usage created addictive personality on users.

As the researchers found the risk of internet addiction on users' lives by causing various problems; it became a global issue that should be addressed without delay.

Globally, most of internet addiction researches were conducted on university students groups because they were the vast majority of those with internet addictions [3], [4], [5], [6]. Therefore, it is urgently needed for educational researchers to recognize and respond to this problem. In Myanmar, however, there was little empirical research on internet addiction. Hence, the main aime of this research grew into examining internet addiction prevalence of university students.

A. Aim of the Study

The main aim of this study is to examine internet addiction prevalence of students from selected technological and computer universities.

B. Research Questions

i) First Research Question: What kinds of internet usage behavior do the participants possess?

ii) Second Research Question: How many internet addicts are there among participants?

iii) *Third Research Question*: Is there any significant difference in internet addiction by gender?

iv) *Fourth Research Question*: Are there any significant relationships among internet addiction, number of SNS and time spent online per day?

C. Definitions of Key Terms

i) Internet: Internet is a massive global network system which is created by linking computers or servers to access and convey information [7].

ii) Internet Addiction: Internet addiction is defined as the overuse of the internet leading to impairment of an individual's psychological state (both mental and emotional), as well as their scholastic, occupational, and social interactions [8].

II. METHODOLOGY

The design adopted in this study was quantitative approach and descriptive survey design.

A. Participants of the Study

A random sampling procedure was used for selecting the participants in this study. All of the participants involved in this study were 405 students form Sagaing Technological University (STU), West Yangon Technological University (WYTU) and University of Computer Studies, Yangon (UCSY). Among the 405 students, 197 (48.64%) were males and 208 (51.35%) were females. Their age ranged from 16 to 23.25 years, with a mean of 17.91 years (*SD* = 1.27 years).

B. Instrumentation

In this study, demographic questions were administered to collect the participants' gender, started time for internet use, time spent online per day, predominant time for internet use, number of social network accounts, and major purpose for internet use. To examine internet addiction of the participants, Internet Addiction Test (IAT) developed by Young (1998) [9], was used. It was composed of 20 items and scored on a 6-point Likert scale. The cut-off scores of IAT differentiated four groups of internet users: normal internet users (0–30) and users with mild (31–49), moderate (50–79) and severe internet addiction (80–100). For the face and content validity, an expert review was conducted by 14 experts in the field of Educational Psychology from Yangon University of Education and Sagaing University of Education (SUOE) after translating the inventory to Myanmar version. The internal consistency for IAT was 0.892.

C. Procedure

To collect the required data, permission was firstly requested from the Department of Higher Education and Rectors of the selected universities. With their permission, the data were collected from first and third year university students during the academic year of (2018-2019). The administration process approximately took about 10 to 15 minutes.

III. FINDINGS

In this section, results of the present study were discussed in accordance with research questions.

A. Internet Usage Behaviors of Participants

Firstly, the participants' started time for internet use was examined by descriptive statistics and the results were shown in Table I.

Table I. Started time for internet use among participants

Variables	Frequency	Percentage
Three Years and Below	237	58.5%
Above Three Years	168	41.5%
Total	405	100%

According to Table I, it can be seen that, off 405 participants who fully complete the survey, 58.5% of the respondents started their internet use most recently and 41.5% of the respondents had above 3 year experience in internet use.

Secondly, participants' time spent online per day was deliberated via descriptive statistics. The results can be seen in the following Table II.

Table II. Time spent online per day among participants

Variables	Frequency	Percentage
≤ 3 Hour per Day	189	46.6%
3> X ≥6 Hour per Day	174	43%
6> X ≥9 Hour per Day	24	5.9%
9> X ≥12 Hour per Day	16	4%
12> X ≥16 Hour per Day	2	0.5%
Total	405	100%

Among 405 respondents, it can be seen that 46.6% of the participants spent three and below three hours per day online while 43 % of them spent more than three hours per day online, but not over six hours. Among the respondents, it was found that 10.4% were surfing the internet above six hours a day.

In general, respondents' average time spent online was found to be 3.92 hours per day, ranging from 30 minutes to 16 hours.

Then, descriptive statistics was conducted to know participants' predominant time for internet use. The results can be seen in the following Table III.

Table III. Predominant time for internet use among participants

Variables	Frequency	Percentage
Morning	1	0.2%
Afternoon	11	2.7%
Evening	43	10.6%
Night	330	81.5%
Other	20	4.9%
Total	405	100%

According Table III, it was found most of respondent (81.5%) used the internet more at night.

Lastly, descriptive statistics was conducted to explore their major purposes for internet use. The result can be seen in Table IV.

Table IV. Major purpose for internet use among participants

Variables	F	%
Participation in Social Networking	212	52.3%
Education	48	11.9%
Gaming and Game Streaming	75	18.5%
Downloading and Streaming Music, Videos and Comedy	28	7%
Reading Online News and Novels	4	1%
Online Chatting and Communication	20	4.9%
Searching Knowledge	13	3.2%
Art, Beauty, Health, Politic and Volunteering	4	1%
E-commerce	1	0.2%
Total	405	100 %

It can be found that major purpose for internet use among 52% of respondent was to participate in social networking sites. Only 12% of university students used internet for educational purpose. Then, 19% of the respondents responded that they used internet mainly for playing games and streaming game videos.

Other respondents stated that their major purpose for internet use was to download and stream music, videos and comedy (7%), to read online news and novels (1%), to make online communication and chatting (4.9%), to search knowledge (3.2%), and to study art, politic, health information, and to do volunteering (1%) and to make e-commerce (0.2%).

B. Internet Addiction Prevalence of Participants

In order to explore internet addiction prevalence of participants, Internet Addiction Test (IAT) developed by Young (1998) was used. The IAT consists of 20 items and there were six options to choose in responding each item, where "0" means "Does not apply". The highest possible score from IAT was 100 and the cut-off scores differentiate internet users into four groups—normal internet user (0-30), users with mild internet addiction (31-49), users with moderate internet addiction (50-79) and users with severe internet addiction (80-100).

Table V showed the prevalence of internet addiction among students from selected technological and computer universities. .

Table V. Prevalence of internet addiction among participants

Categories	F	%
Normal Internet Users (0-30)	120	29.6%
Mild Internet Addiction (31-49)	162	40%
Moderate Internet Addiction (50-79)	117	28.9%
Severe Internet Addiction (80-100)	6	1.5%
Total	405	100%

It can be seen that, off the 405 respondents who fully complete the survey, 29.6% were found to be normal internet users. Then, it was found that 40 % of respondents had mind internet addiction level, 28.9 % had moderate internet addiction level and 1.5% had severe internet addiction level.

In addition to this categorization, Young (1996) stated that the person who got the scores above and equal 50 generally met the criteria of internet addiction. Hence, it was found that 123 (30.4%) students from selected technological and computer universities met criteria of internet addiction.

C. Comparison of University Students' Internet Addiction by Gender

To test internet addiction of students from selected technological and computer universities by gender, independent samples *t* test was used (See in Table VI).

Table VI. Results of independent samples *t* test for internet addiction of university students by gender

Variable	Gender	Mean	*SD*	*t*	*p*
Internet Addiction	Male	43.58	17.22	3.035**	0.003
	Female	38.40	17.10		

Note: ** Significance at 0.01 Level.

It was found that, for internet addiction, the mean score of male students (43.58) was greater than that of the female ones (38.40) and there was significant difference in internet addiction by gender at 0.01 level (t=3.035, p=0.003). So, it can be concluded that male students from selected technological and computer universities were found to have higher probability of internet addiction than female ones.

D. Relationships Among Internet Addiction, Number of SNS and Time Spent Online per Day of Students

Pearson Product-Moment Correlation was conducted to explore the relationships among internet addiction, number of SNS and time spent online per day.

Table VII. Correlation matrix among internet addiction, number of sns and time spent online per day

Variable	No. of SNS	Time Spent Online per Day
Internet Addiction	.137**	.251***

Note ** Significance at 0.01 Level.
*** Significance at 0.001 Level.

According to the Table VII, statistically significant positive correlation was found between number of SNS and internet addiction (r = .137, p = 0.006). Moreover, it was also found statistically significant positive correlation between time spent online per day and internet addiction (r = .251, p = 0.000). Therefore, it can be concluded that the more SNS and online

time university students surfed, the higher probability of internet addiction they occupied.

IV. CONCLUSION

In this study, the first research question was: "What kinds of internet usage behavior do participants possess?

Concerning internet usage behavior, it was found that some respondents started their internet use in the last three years and some had experience in using internet over three years. Generally, most of respondents used internet for 3.92 hours per day.

Their predominant time for internet use was at night and their major purpose of surfing internet was for social networking, especially, Facebook. Reference [10] stated that social networking can trigger the prevalence of internet addiction. Therefore, the administrators should be alert to this threat and help students spend their leisure time effectively.

The second research question of this study was: "How many internet addicts are there among participants?

The present study found that 30 in 100 respondents were addicted to the internet.

In the previous studies, the prevalence of internet addiction among university students varies across studies and regions, ranging from 4% to 25% ([11], [12], [13], [14]). More specifically, the following studies also reported on the prevalence of internet addiction among university/college students population, 0.8 % in Italy [15], 0.9% in Jordan [16], 9.8% in the USA [17], 5.9~15.3% in Taiwan [13], [18], 16.2% in Poland [19], 18.3% in Great Britain [6], 5.6~36.9% in China [20], [21].

Comparing with these previous studies, the internet addiction prevalence of the participants was relatively high. The higher prevalence of internet addiction may have serious impact on various social, mental, and physical health as well as academic performance. Therefore, it is needed for the university learning environment to urgently respond to this prevalence.

The third research question of this study was: "Is there any significant difference in internet addiction of students from selected technological and computer universities by gender"

This study found that males were more likely to be addicted to the internet. Likewise, many previous studies also found the consistent results [9], [11], [12]. This may be because of male students' excessive time spent on online games. Females may easily get bored with the complicated functions of games while males were favor in risk-taking behavior. Besides, most girls cannot tolerate sleep deprivation for playing online games, but males do. Based on the findings, male students were suggested to regulate their excessive internet use on online games.

The last research question of the present study was: "Are there any significant relationships among internet addiction, number of SNS they occupied and their time spent online per day?"

Concerning with this research question, it was found that the more SNS and online time students surfed, the higher probability of internet addiction they possessed. Likewise, several previous studies have also reported the same results [10], [6], [8]. Therefore, university students should regulate their online time and control their excessive surfing of SNS.

In summary, this study hoped to provide baseline data on internet addiction prevalence for technological and computer universities. Based on the result of this study, comparative studies on internet addiction prevalence with other populations and future studies on factors influencing high prevalence of participants were recommended. Moreover, it is necessary for university students to be educated for the proper use of internet in order to prevent from internet addiction.

ACKNOWLEDGEMENT

Firstly, we would like to offer respectful gratitude to Dr. Saw Pyone Naing (Rector, Sagaing University of Education), Dr. Myat Myat Thaw (Pro-rector, Sagaing University of Education) and Dr. Khin Hnin Nwe (Head of Department of Educational Psychology, Sagaing University of Education) who allowed us to do this research paper. Then, we would also like to thank all of participants from selected technological and computer universities for their active cooperation in the data collection process of this study.

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